

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001067

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. <sup>7</sup>: G06N 1/00, H01L 29/15, G01R 29/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI, JAPIO Keywords: qubit, quantum; energ, well; coupl, tunnel; weak, adiabatic, afp, slow var, read out, tomograph, interrogat; control, adjust, scan, modulat; output

GOOGLE Keywords: adiabatic fast passage; quantum

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	A. D. Greentree <i>et al.</i> , "Charge shelving and bias spectroscopy for the readout of a charge qubit on the basis of superposition states", Physical Review B, 16 July 2004, vol. 70, article 041305 Whole document	1-41
P, X	A. D. Greentree <i>et al.</i> , "Electrical readout of a spin qubit without double occupancy" (online), 24 March 2004 (retrieved on 8 October 2004). Retrieved from the Internet <URL: <a href="http://xxx.lanl.gov/abs/cond-mat?0403449">http://xxx.lanl.gov/abs/cond-mat?0403449</a> >. Whole document	1-41

☒ Further documents are listed in the continuation of Box C
☒ See patent family annex

- \* Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
11 October 2004

Date of mailing of the international search report

14 OCT 2004

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5663571 A (UGAJIN) 2 September 1997 Whole document	1-41
A	Patent Abstracts of Japan, JP 09-326485 A (SONY CORP) 16 December 1997 Whole document	1-41
A	Hollenberg <i>et al.</i> , "Charge-based quantum computing using single donors in semiconductors" (online), 10 June 2003 (retrieved 11 October 2004). Retrieved from the Internet <URL: <a href="http://au.arxiv.org/abs/cond-mat/0306235">http://au.arxiv.org/abs/cond-mat/0306235</a> >. Whole document	1-41
P, A	WO 2004/049252 A2 (D-WAVE SYSTEMS, INC.) 10 June 2004 Pages 26-29	1-41

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

**PCT/AU2004/001067**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
US	5663571	JP	7297381
JP	9326485	NONE	
WO	04049252	NONE	
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.			
END OF ANNEX			